

### **AMENDMENTS TO THE CLAIMS**

The following Listing of Claims replaces all previous listings of claims in this application.

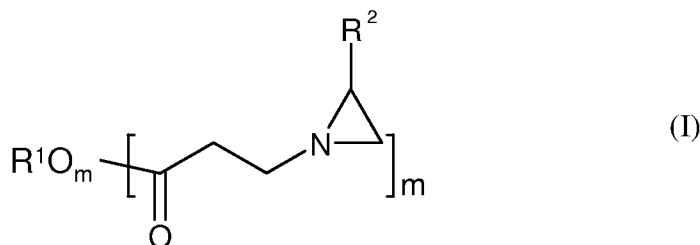
#### **Listing of Claims:**

1. (Currently amended) A substantially chromium-free process for passivating metallic surfaces of Zn, Zn alloys, Al or Al alloys by treating the surface with an acidic aqueous formulation having a pH of from 1 to 6 of a polymer comprising -COOH groups and/or salts thereof wherein the formulation (Z) used for the treatment at least comprises
  - (a) at least one substantially noncrosslinked, water-soluble copolymer (A) comprising at least 50% by weight of (meth)acrylic acid units and 5 to 40% by weight of at least one comonomer which comprises acidic groups but is other than (meth)acrylic acid, in a concentration of from 0.1 g/l to 200 g/l, and
  - (b) water or an aqueous solvent mixture (B) comprising at least 80% by weight of water,and the surface is further treated with at least one water-soluble crosslinker, the crosslinker comprising at least 2 crosslinking groups selected from the group consisting of azirane, oxirane, and thiirane groups and joined to one another by means of a linking group (X) comprising at least 2 carbon atoms, the number-average molecular weight  $M_n$  of the crosslinker being from 112 to 5000 g/mol, the solubility of the crosslinker in water being at least 10 g/l, and the treatment with the crosslinker being carried out before, after or simultaneously with the treatment with the formulation (Z),

wherein a passivating layer on the metallic surface is obtained whose thickness is from

0.01 to 3 micrometer, and  
wherein the pH of the formulation is controlled by the nature and concentration of the  
(meth)acrylic acid units and the at least one comonomer which comprises acidic  
groups but is other than (meth)acrylic acid.

2. (Original) The process according to claim 1, wherein the treatment with the crosslinker and with the formulation (Z) is carried out simultaneously and the crosslinker is present in the formulation (Z).
3. (Previously presented) The process according to claim 1, wherein (Z) further comprises an organic or inorganic acid.
4. (Original) The process according to claim 3, wherein the acid is H<sub>3</sub>PO<sub>4</sub> and/or HNO<sub>3</sub>.
5. (Previously presented) The process according to claim 1, wherein the crosslinker is a crosslinker of the general formula (I)



which contains at least two azirane groups and where m is a natural number  $\geq 2$ ,  
R<sup>1</sup>O<sub>m</sub>- is an m-valent, aliphatic alkoxy radical, and R<sup>2</sup> is H or methyl.

6. (Previously presented) The process according to claim 1, wherein the crosslinker is a crosslinker of the general formula (II)



which contains at least two oxirane groups and where  $m$  is a natural number  $\geq 2$ , and  $\text{R}^1\text{O}_m\text{---}$  is an  $m$ -valent, aliphatic alkoxy radical.

7. (Previously presented) The process according to claim 5, wherein  $m$  is a natural number from 2 to 6.
- 8-9. (Canceled)
10. (Previously presented) The process according to claim 1, wherein the weight ratio of polymer to crosslinker is from 0.5 : 1 to 50 : 1.
11. (Previously presented) The process according to claim 1, wherein the solvent is water.
12. (Previously presented) The process according to claim 1, wherein subsequently the metal surface is heated after the treatment.

13. (Previously presented) The process according to claim 1, wherein the treatment takes place by means of rolling, spraying or dipping methods.
14. (Previously presented) The process according to claim 1, wherein the metal surface is the surface of a strip metal.
15. (Original) The process according to claim 14, wherein the strip metal is electrolytically galvanized or hot-dip galvanized steel.
16. (Previously presented) The process according to claim 14, wherein the treatment is carried out by means of a continuous process.
17. (Previously presented) The process according to claim 14, wherein the surface is contacted with the formulation for a time of from 1 to 60 s.
- 18-24. (Canceled)
25. (New) The process according to claim 1, further comprising synthesizing the copolymer A from 70 to 80% by weight of (meth)acrylic acid and from 20 to 30% by weight of maleic anhydride.
26. (New) The process according to claim 1, further comprising synthesizing the copolymer A from 70 to 80% by weight of (meth)acrylic acid, from 15 to 25% by weight of maleic anhydride, and from 1 to 10% by weight of vinylphosphonic acid.

27. (New) The process according to claim 1, wherein the copolymer A further comprises a monomer containing OH-groups.